

# CHESTERFIELD COUNTY DECK, STAIR AND RAMP DETAILS

8/20/2008

## DECK DESIGN (INCLUDING STAIRS AND RAMPS - SIMILAR FOR SCREEN PORCHES)

THESE DESIGN SHEETS ARE GUIDELINES FOR A SIMPLE, SINGLE LEVEL DECK. IF A SPA, HOT TUB OR OTHER SPECIAL USE IS INTENDED, SEEK THE HELP OF A DESIGN PROFESSIONAL. THERE ARE MANY EXCELLENT REFERENCE BOOKS AVAILABLE FROM HOME IMPROVEMENT STORES, THE LIBRARY OR THE INTERNET TO PROVIDE CUSTOM DESIGNS AND CONSTRUCTION METHODS.

THESE DESIGN SHEETS ARE BASED ON THE PRESCRIPTIVE REQUIREMENTS OF THE INTERNATIONAL RESIDENTIAL CODE (IRC) AND IN SOME CASES EXCEED THE CODE BASED ON CURRENT "BEST PRACTICES" ENCOURAGED IN CHESTERFIELD COUNTY. THIS DOCUMENT IS NOT INTENDED TO PRECLUDE THE USE OF OTHER CONSTRUCTION METHODS OR MATERIALS.

## HOW TO USE THE CHESTERFIELD COUNTY DECK GUIDE

1. DECIDE ON THE APPROXIMATE DIMENSIONS AND LOCATION OF THE DECK YOU WANT TO BUILD.
2. DECIDE ON THE FRAMING STYLE YOU PREFER. THREE OPTIONS ARE PROVIDED FOR YOU:
  - A. CANTILEVERED DECK - SHEETS 2 AND 3
  - B. FREE STANDING DECK (PREFERRED) - 4 AND 5
  - C. FLUSH STYLE DECK - SHEETS 6 AND 7
3. NEXT, MAKE DECISIONS ON THE MATERIALS YOU WANT TO USE. A LUMBER SIZING GUIDE IS PROVIDED ON SHEETS 8 AND 9:
  - A. DECIDE ON THE SIZE OF YOUR DECK JOISTS.
  - B. DECIDE ON THE NUMBER OF FOOTINGS.
  - C. BASED ON THE JOIST SIZE AND FOOTING SPACING, DETERMINE THE GIRDER BEAM SIZE.
  - D. DECIDE IF YOU WANT WOOD POSTS OR BRICK PIERS TO SUPPORT YOUR DECK. IF YOU WANT WOOD POSTS, CHOOSE THE POST SIZE BASED ON THE HEIGHT OF THE DECK ABOVE THE GROUND.
  - E. CHOOSE THE APPROPRIATE FOOTING FOR THE POSTS YOU CHOSE.
4. BASED ON YOUR DECISIONS IN STEP 3, PROVIDE THE LENGTH AND WIDTH DIMENSIONS OF YOUR DECK AND COMPLETE THE LIST OF MATERIALS ON THE PLAN SHEET, EITHER SHEET 2,4 OR 6.
5. FOR YOUR CONVENIENCE, WE HAVE PROVIDED TYPICAL CROSS-SECTION SKETCHES (SHEETS 3, 5 AND 7 RESPECTIVELY). USE THEM IF YOU PREFER, OR DESIGN YOUR OWN DETAILS AND PROVIDE YOUR SKETCHES.
6. DRAW A PLAN OF YOUR PROPERTY (REFERRED TO AS A "PLAT"). SKETCH YOUR HOUSE AND SHOW WHERE THE DECK IS INTENDED TO BE CONSTRUCTED. PROVIDE APPROXIMATE DIMENSIONS OF THE DECK TO YOUR PROPERTY LINES.
7. USE THE ATTACHED DETAILS FOR OTHER ASPECTS OF THE CONSTRUCTION:
  - A. ATTACHMENT OF THE GUARD POST TO THE GIRDER BEAM.
  - B. FLASHING DETAILS (IF APPROPRIATE)
  - C. LEDGER ATTACHMENT DETAILS (IF APPROPRIATE).
8. SUBMIT 1 COPY OF YOUR PLAT PLAN, AND 2 COPIES OF THE DECK PLAN AND CROSS-SECTION DETAILS.
9. YOU WILL NEED THE FOLLOWING INSPECTIONS:
  - A. FOOTING INSPECTION PRIOR TO THE PLACEMENT OF CONCRETE.
  - B. FINAL INSPECTION.

NOTE: THE FOOTING INSPECTION AND FINAL INSPECTION CAN BE COMBINED INTO A SINGLE INSPECTION VISIT IF YOU USE SOLID CONCRETE MASONRY PIER BLOCKS AS THE FOOTING AND LEAVE THE FOOTINGS EXPOSED FOR THE INSPECTOR.

## GENERAL REQUIREMENTS

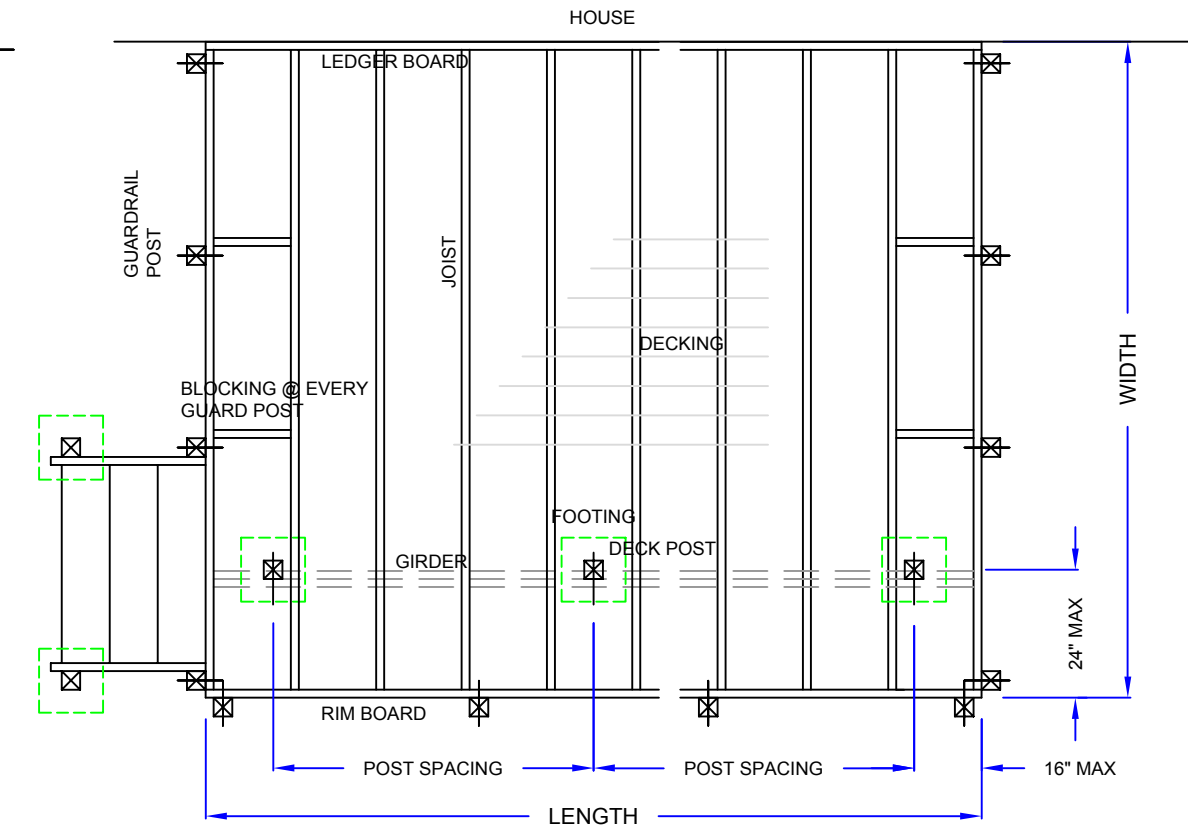
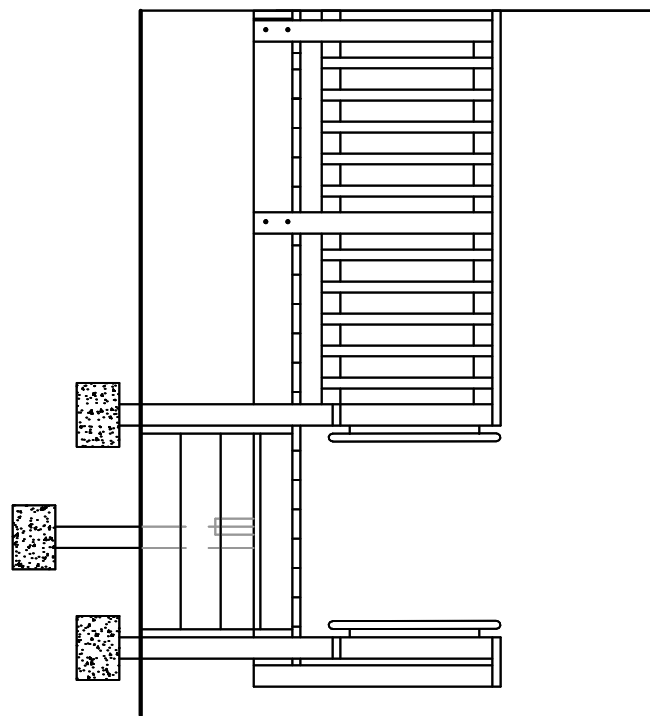
1. FRAMING SHALL BE BASED ON 40 LBS PER SQ FT LIVE LOAD, AND 10 LBS PER SQ FT DEAD LOAD. DO NOT PLACE A SPA OR HOT TUB ON THIS DECK WITHOUT FURTHER SUPPORTS AS REQUIRED BY A DESIGN PROFESSIONAL.
2. ALL DECK MATERIALS SHALL BE PRESERVATIVE TREATED (P.T.) LUMBER OR COMPOSITE MATERIAL SPECIFICALLY DESIGNED FOR DECKS AND OUTSIDE USE. ALL CUT MATERIALS SHALL HAVE THEIR ENDS TREATED WITH AN APPROVED PRESERVATIVE, SUCH AS COPPER NAPHTHENATE. BORATE TREATED WOOD PRODUCTS ARE NOT PERMITTED FOR CONTACT WITH THE GROUND.
3. TO RESIST CORROSION FOR USE WITH PRESERVATIVE TREATED (P.T.) WOOD, THE FOLLOWING IS REQUIRED:
  - ALL SCREWS, BOLTS, NAILS AND FASTENERS SHALL BE HOT-DIPPED GALVANIZED (HDG IN ACCORDANCE WITH ASTM A-153 OR B-695, CLASS 55), STAINLESS STEEL, OR AN APPROVED SPECIAL COATED FASTENER FOR USE WITH ALKALINE COPPER QUAT (ACQ) PRESERVATIVE TREATED LUMBER.
  - BORATE TREATED LUMBER MAY NOT BE USED IN CONTACT WITH THE GROUND.
  - WHERE A MATERIAL IS LISTED AS "HDG" IN THIS GUIDE, ANY OF THE ABOVE MENTIONED MATERIALS MAY BE SUBSTITUTED.
4. FLASHING SHALL BE A MINIMUM 19 MIL THICK CORROSION-RESISTANT METAL OR AN APPROVED NON-METALIC MATERIAL. ALUMINUM FLASHING IS NOT ALLOWED.
5. IF YOU ARE ATTACHING THE DECK TO THE HOUSE, THE HOUSE SHALL HAVE A PRESERVATIVE TREATED, NOMINAL SIZE, WOOD BAND BOARD ALONG THE ENTIRE LENGTH OF THE ATTACHMENT AREA. PLYWOOD IS NOT ACCEPTABLE.
6. WHERE THRU BOLTS ARE TO BE USED, COMPARABLE WASHERS AND NUTS ARE ASSUMED TO BE PART OF THE ASSEMBLY.
7. DO NOT CONSTRUCT FOOTINGS OVER UTILITY LINES. CALL MISS DIG AT 811 BEFORE YOU START!

## STANDARD ABBREVIATIONS

HDG - HOT DIPPED GALVANIZED (IN ACCORDANCE WITH ASTM A-153 OR B695, CLASS 55)

O.C. - ON CENTER

P.T. - PRESERVATIVE TREATED



### CANTILEVER DECK PLAN SPECIFICATIONS

LENGTH \_\_\_\_\_ FT

WIDTH \_\_\_\_\_ FT

POST SPACING \_\_\_\_\_ FT O.C.

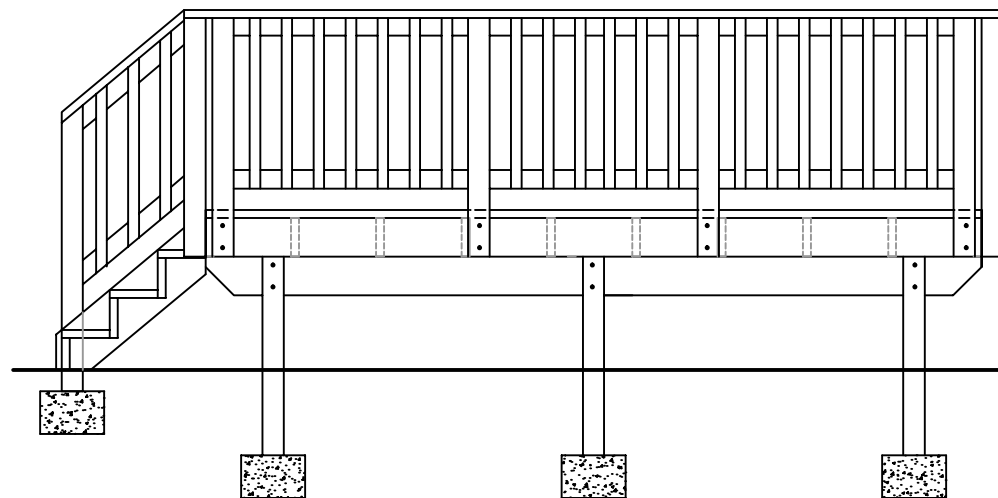
FOOTING DEPTH \_\_\_\_\_ IN

POST SIZE \_\_\_\_\_ x \_\_\_\_\_

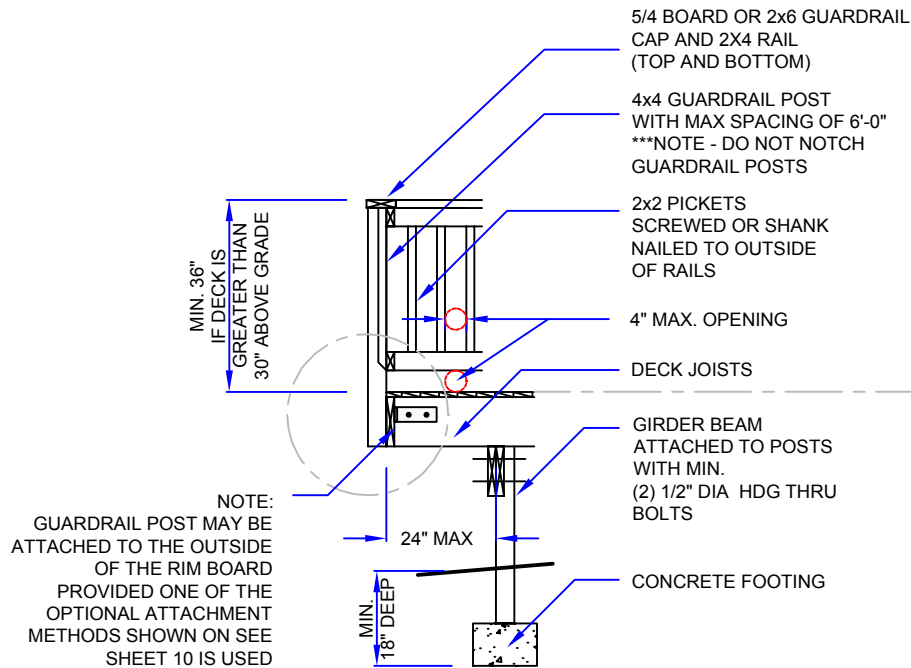
GIRDER SIZE (\_\_\_\_) 2x \_\_\_\_\_

JOIST SIZE 2 x \_\_\_\_\_ @ \_\_\_\_\_ IN O.C.

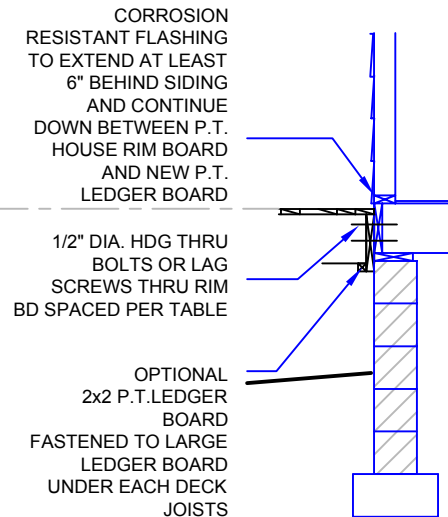
Fill in all the blanks



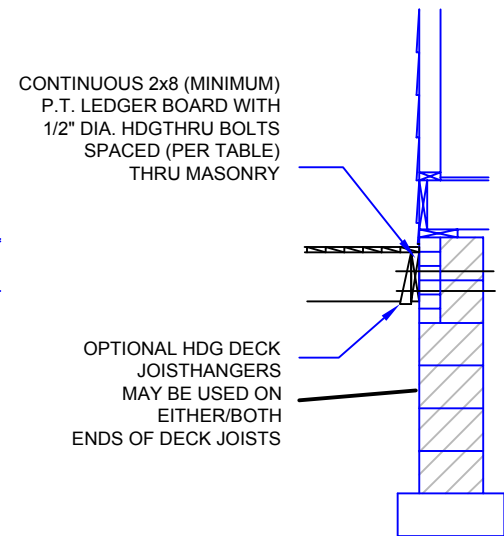
## CANTILEVER DECK PLAN



**CANTILEVER DECK**



**ATTACHMENT OF DECK TO HOUSE RIM BOARD**



**ATTACHMENT OF DECK TO HOUSE MASONRY FOUNDATION WALL**

**NOTE: DO NOT ATTACH DECK TO HOUSE THROUGH THE SIDING.**

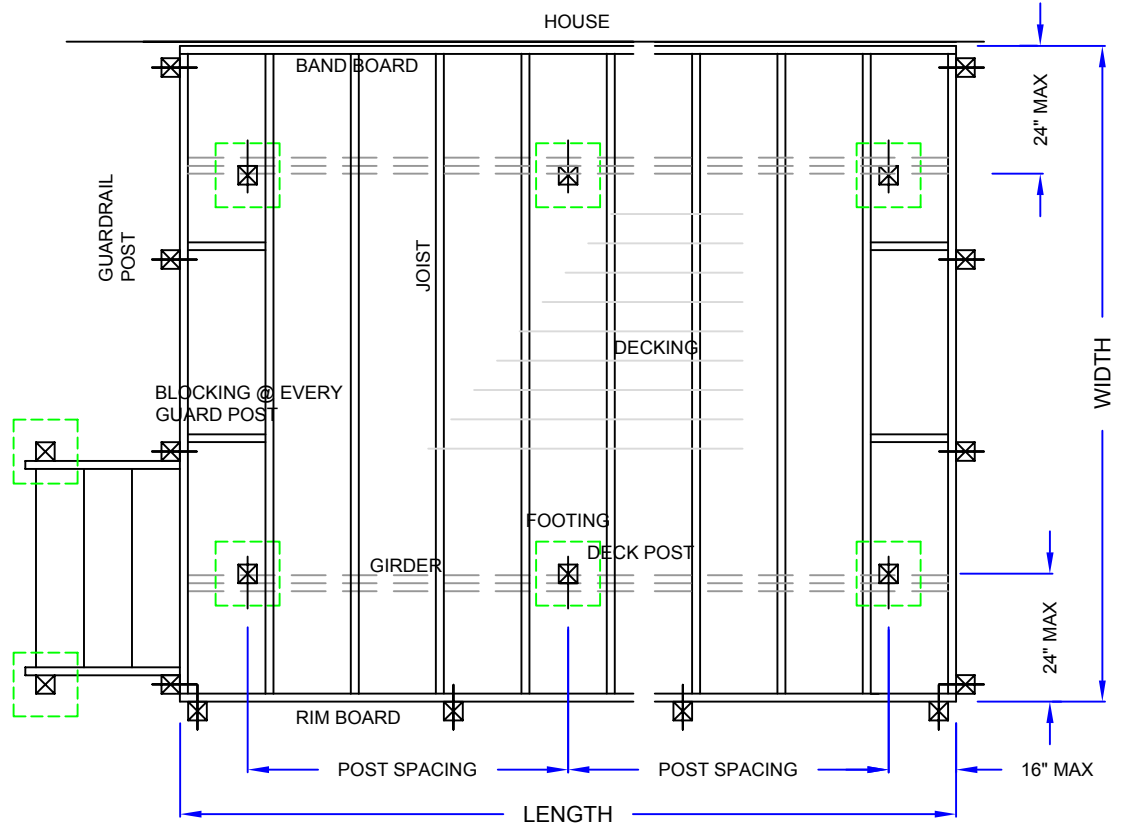
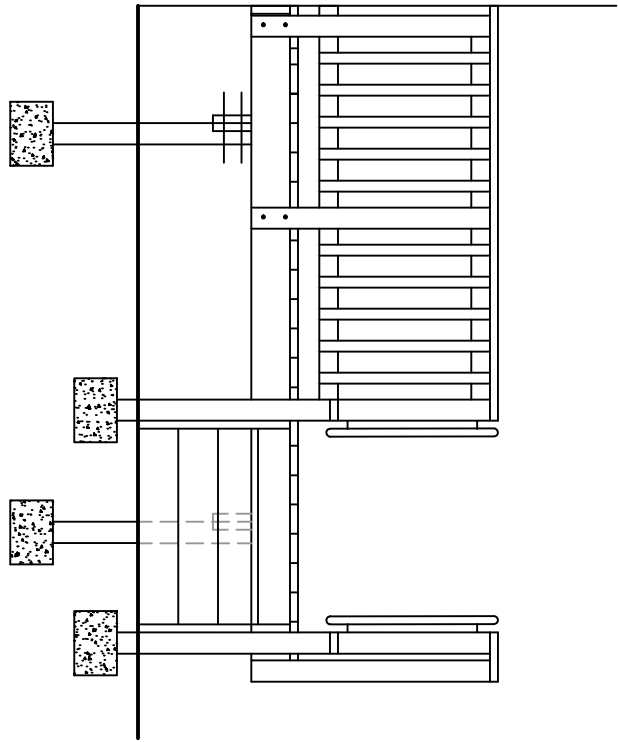
**On-Center Spacing for Fasteners Attaching Decks to Houses**

Joist span (ft)	6' and less	6'-1" 8'-0"	8'-1" 10'-0"	10'-1" 12'-0"	12'-1" 14'-0"	14'-1" 16'-0"	16'-1" 18'-0"
1/2" x 4" Lag Screws	30"	23"	18"	15"	13"	11"	10"
1/2" Bolt w/ washers	36"	36"	34"	29"	24"	21"	19"

**Notes:**

1. The maximum gap between the face of the ledger board and face of the house band joist shall be 1/2".
2. The tip of the lag screw shall fully extend beyond the inside of the band joist (board).
3. Ledgers shall be flashed to prevent water from contacting the house band joist (board).
4. Lag screws and bolts shall be staggered and shall not be closer than 2" to the top and bottom of the ledger.
5. Deck ledgers shall be 2x8 preservative treated Southern Pine (minimum) or other approved method and material as established by standard engineering practice.

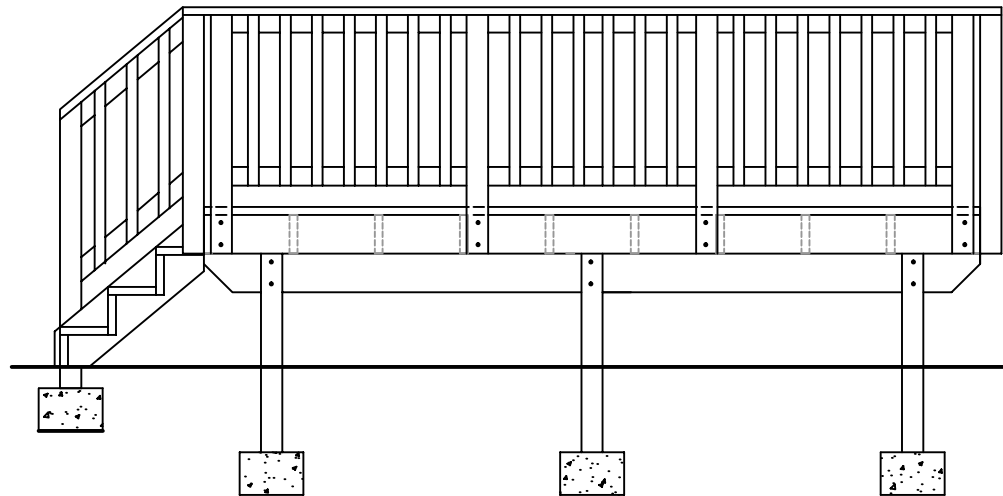
# CANTILEVER DECK DETAILS



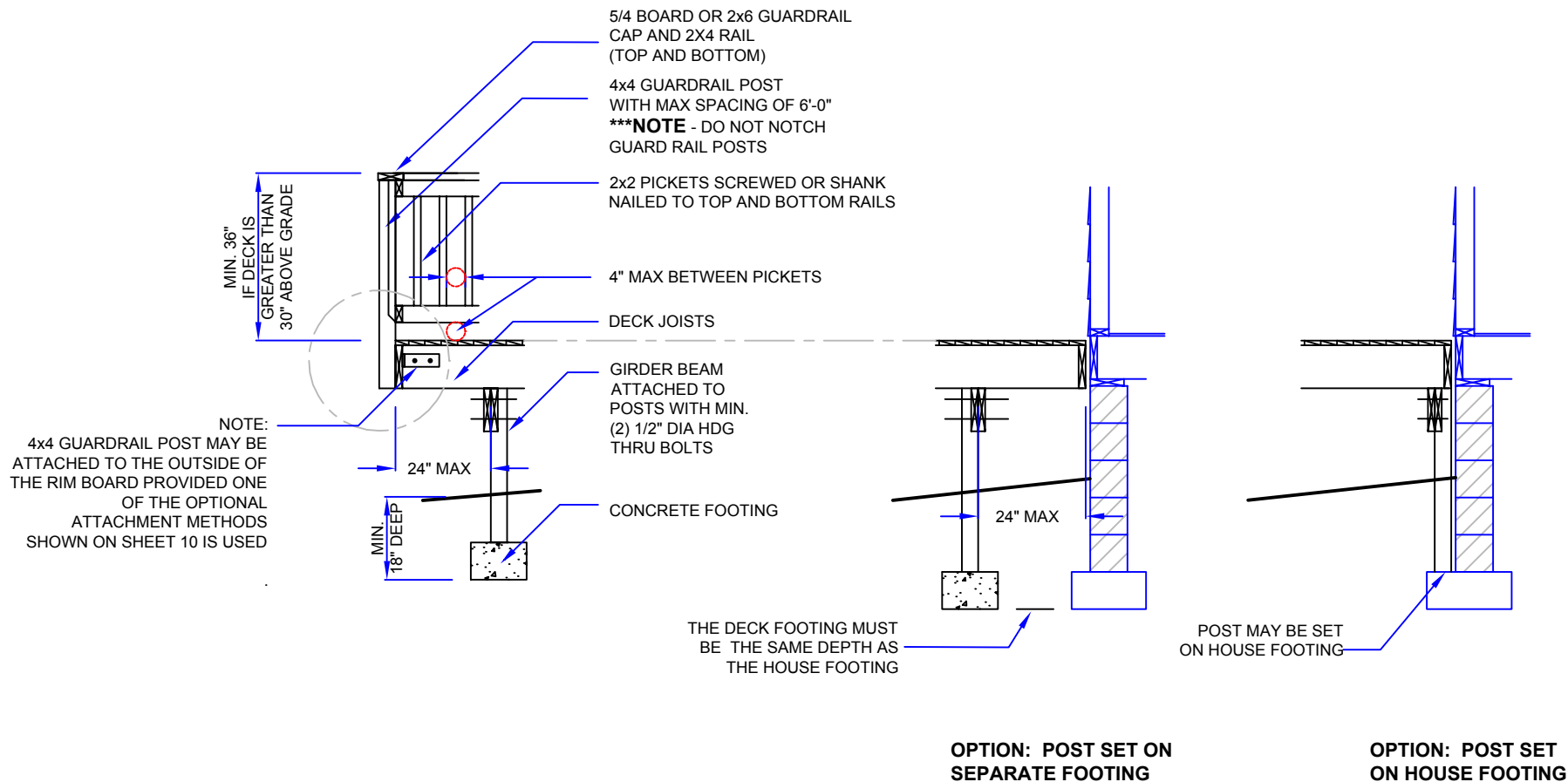
### FREE STANDING DECK PLAN SPECIFICATIONS

LENGTH \_\_\_\_\_ FT  
 WIDTH \_\_\_\_\_ FT  
 POST SPACING \_\_\_\_\_ FT O.C.  
 FOOTING DEPTH \_\_\_\_\_ IN  
 POST SIZE \_\_\_\_\_ x \_\_\_\_\_  
 GIRDER SIZE (\_\_\_\_) 2x \_\_\_\_\_  
 JOIST SIZE 2 x \_\_\_\_\_ @ \_\_\_\_\_ IN O.C.

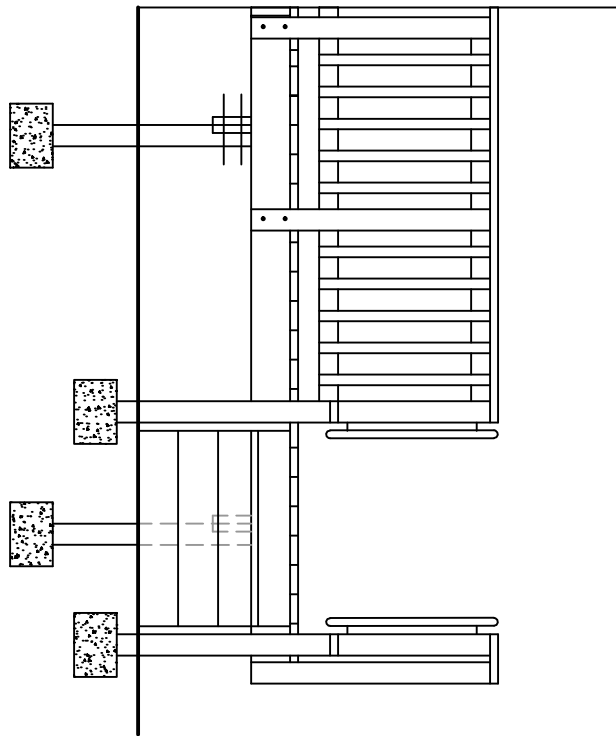
Fill in all the blanks



## FREE STANDING DECK PLAN



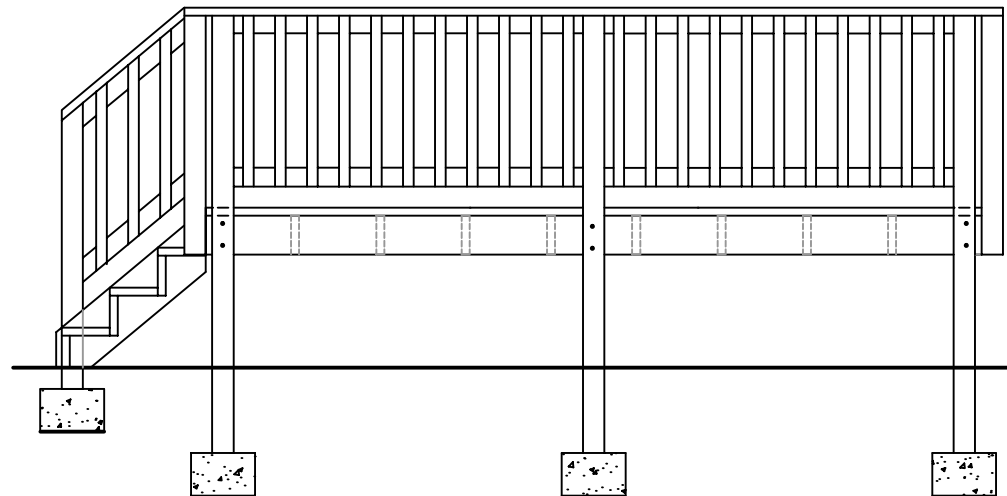
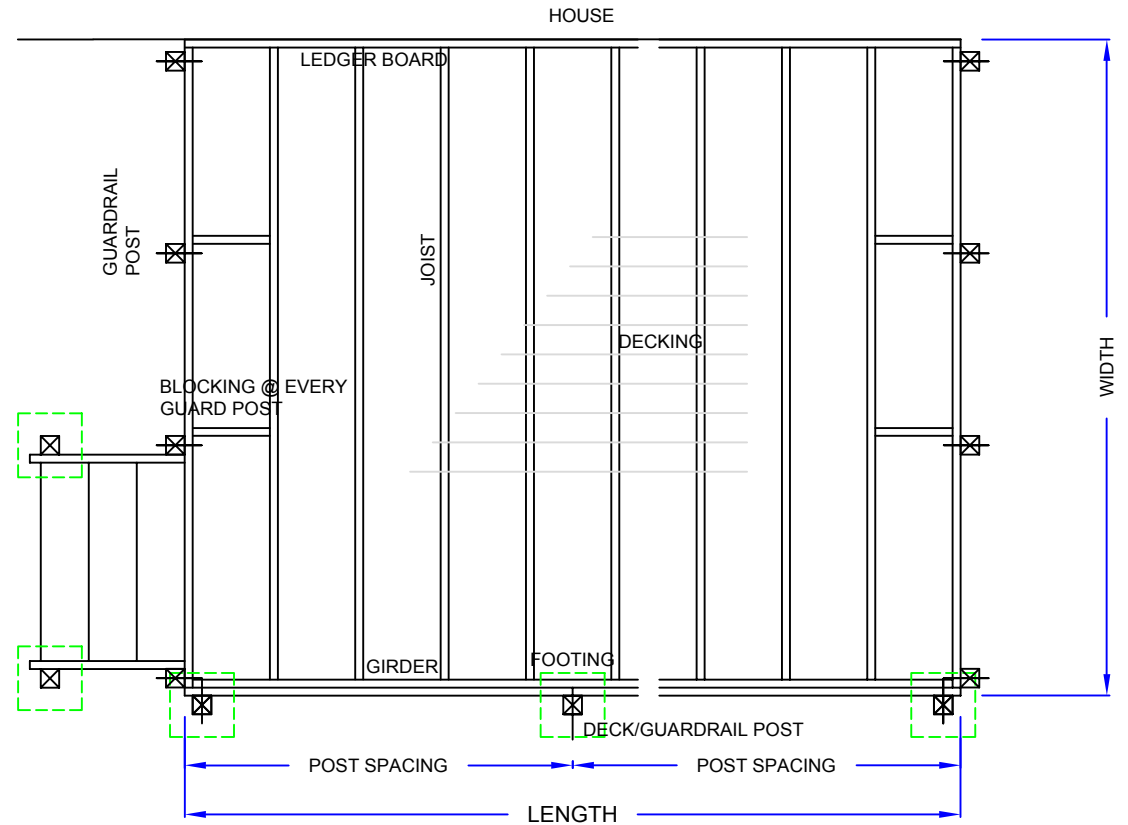
# FREE STANDING DECK DETAILS



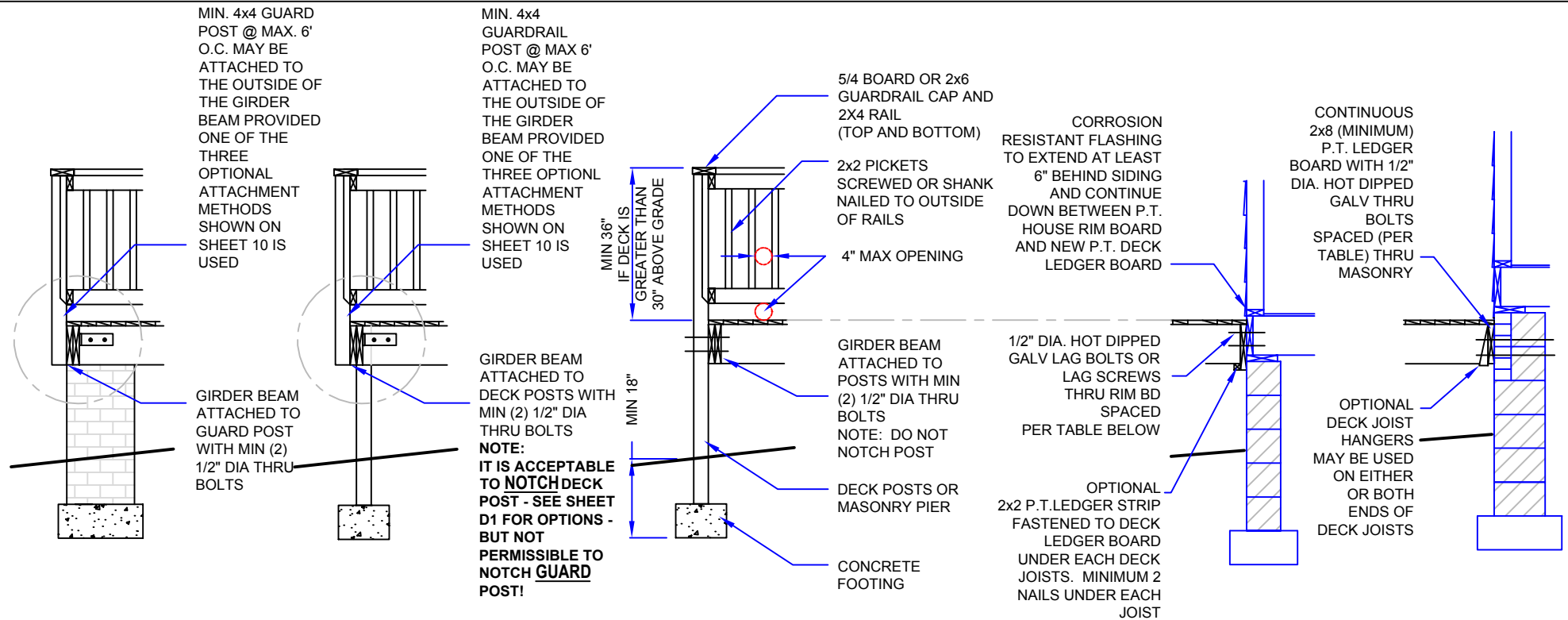
### FLUSH STYLE DECK PLAN SPECIFICATIONS

LENGTH \_\_\_\_\_ FT  
 WIDTH \_\_\_\_\_ FT  
 POST SPACING \_\_\_\_\_ FT O.C.  
 FOOTING DEPTH \_\_\_\_\_ IN  
 POST SIZE \_\_\_\_\_ x \_\_\_\_\_  
 GIRDER SIZE (\_\_\_\_) 2x \_\_\_\_\_  
 JOIST SIZE 2 x \_\_\_\_\_ @ \_\_\_\_\_ IN O.C.

Fill in all the blanks



## FLUSH STYLE DECK PLAN



**ATTACHMENT OF GUARD POST TO GIRDER BEAM WHEN USING MASONRY PIER;**

**NOTE: DO NOT NOTCH THE GUARD POST.**

**ATTACHMENT OF GUARD POST TO GIRDER BEAM WHEN USING SEPARATE GUARD POST**

**NOTE: DO NOT NOTCH THE GUARD POST**

**ATTACHMENT OF CONTINUOUS GUARD POST TO GIRDER BEAM**

**NOTE: DO NOT NOTCH THE POST**

**ATTACHMENT OF DECK TO HOUSE RIM BOARD**

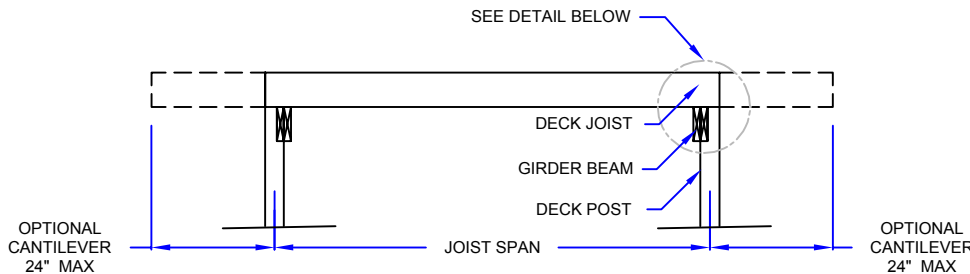
**ATTACHMENT OF DECK TO HOUSE MASONRY FOUNDATION WALL**

**On-Center Spacing for Fasteners Attaching Decks to Houses**

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- Notes:
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  4. Lag screws and bolts shall be staggered and shall not be closer than 2" to the top and bottom of the ledger.
  5. Deck ledgers shall be 2x8 preservative treated Southern Pine (minimum) or other approved method and material as established by standard engineering practice.

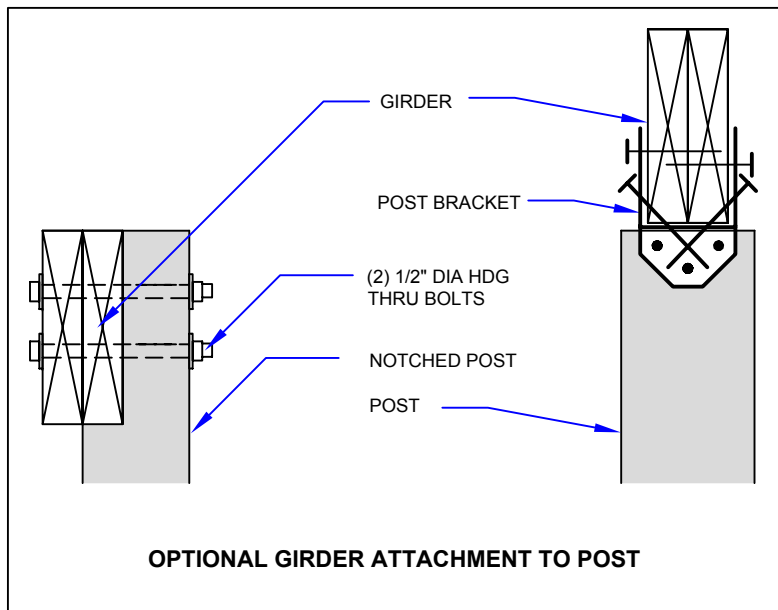
# FLUSH DECK DETAILS



MAXIMUM JOIST SPAN				
SPECIES	SIZE	12" O.C.	16" O.C.	24" O.C.
SOUTHERN PINE <small>(for other species, refer to industry specifications)</small>	2x6	10'-0"	9'-0"	8'-0"
	2x8	14'-0"	12'-10"	11'-0"
	2x10	18'-0"	16'-0"	13'-0"
	2x12	21'-0"	18'-10"	15'-0"

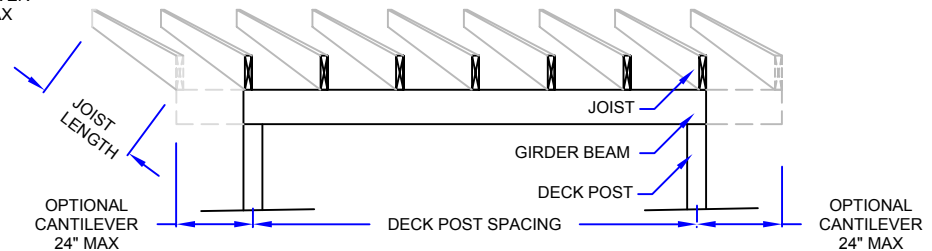
### JOIST SIZE

THE SPAN OF THE JOIST IS MEASURED FROM THE CENTERLINE OF BEARING AT ONE END OF THE JOIST (i.e. TYPICALLY THE CENTERLINE OF THE POST) TO THE CENTERLINE OF BEARING AT THE OTHER END OF THE JOIST, AND DOES NOT INCLUDE THE LENGTH OF THE OVERHANGS (CANTILEVERS).



### GIRDER BEAM (DECK BEAM)

1. GIRDER BEAMS SUPPORT THE DECK JOISTS. THE JOISTS EITHER BEAR ON TOP OF THE GIRDER FOR A CANTILVER DESIGN, OR ARE HUNG FLUSH ALONG SIDE IT WITH MECHANICAL HANGERS.
2. TWO OR THREE MEMBERS MAY BE CONNECTED TOGETHER TO FORM THE GIRDER BEAM USING 10-d HDG NAILS OR #10 HDG SCREWS, STAGGERED IN TWO ROWS, AT 16" O.C.
3. WHENEVER FOUR OR MORE MEMBERS ARE USED, THEY SHOULD BE BOLTED TOGETHER WITH 1/2" DIA HDG THRU-BOLTS AT 24" O.C.



SOUTHERN PINE - MINIMUM GIRDER SIZE <sup>a</sup>									
JOIST SPAN LENGTH	DECK POST SPACING								
	4'	5'	6'	7'	8'	9'	10'	11'	12'
6'	(1) 2x6	(1) 2x6	(1) 2x6	(2) 2x6	(2) 2x6	(2) 2x6	(2) 2x8	(2) 2x8	(2) 2x10
7'	(1) 2x6	(1) 2x6	(1) 2x6	(2) 2x6	(2) 2x6	(2) 2x8	(2) 2x8	(2) 2x10	(2) 2x10
8'	(1) 2x6	(1) 2x6	(2) 2x6	(2) 2x6	(2) 2x8	(2) 2x8	(2) 2x8	(2) 2x10	(2) 2x10
9'	(1) 2x6	(1) 2x6	(2) 2x6	(2) 2x6	(2) 2x8	(2) 2x8	(2) 2x10	(2) 2x10	(2) 2x12
10'	(1) 2x6	(1) 2x6	(2) 2x6	(2) 2x6	(2) 2x8	(2) 2x8	(2) 2x10	(2) 2x10	(2) 2x12
11'	(1) 2x6	(2) 2x6	(2) 2x6	(2) 2x6	(2) 2x8	(2) 2x10	(2) 2x10	(2) 2x12	(2) 2x12
12'	(1) 2x6	(2) 2x6	(2) 2x6	(2) 2x6	(2) 2x8	(2) 2x10	(2) 2x10	(2) 2x12	(3) 2x10
13'	(1) 2x6	(2) 2x6	(2) 2x6	(2) 2x8	(2) 2x8	(2) 2x10	(2) 2x10	(2) 2x12	(3) 2x10
14'	(1) 2x6	(2) 2x6	(2) 2x8	(2) 2x8	(2) 2x10	(2) 2x10	(2) 2x12	(3) 2x10	(3) 2x10
15'	(2) 2x6	(2) 2x6	(2) 2x8	(2) 2x8	(2) 2x10	(2) 2x12	(2) 2x12	(3) 2x10	(3) 2x12
16'	(2) 2x8	(2) 2x8	(2) 2x8	(2) 2x10	(2) 2x12	(2) 2x12	(2) 2x12	(3) 2x12	(3) 2x12

a. For other species of deck joists, refer to species specific data.

### DECKING BOARDS

1. DECKING BOARDS ARE TYPICALLY 2x6, 5/4 BOARDS, OR MANUFACTURED COMPOSITE MATERIAL.
2. ATTACH DECKING BOARDS TO DECK JOISTS WITH 2-8d HDG NAILS OR (2) #8 HDG SCREWS.
3. DECK BOARDS SHALL BE SPACED APPROXIMATELY 1/8" APART.
4. DECKING MAY BE APPLIED DIAGONALLY.
5. EACH PIECE OF DECKING MUST BEAR ON AT LEAST 4 JOISTS.



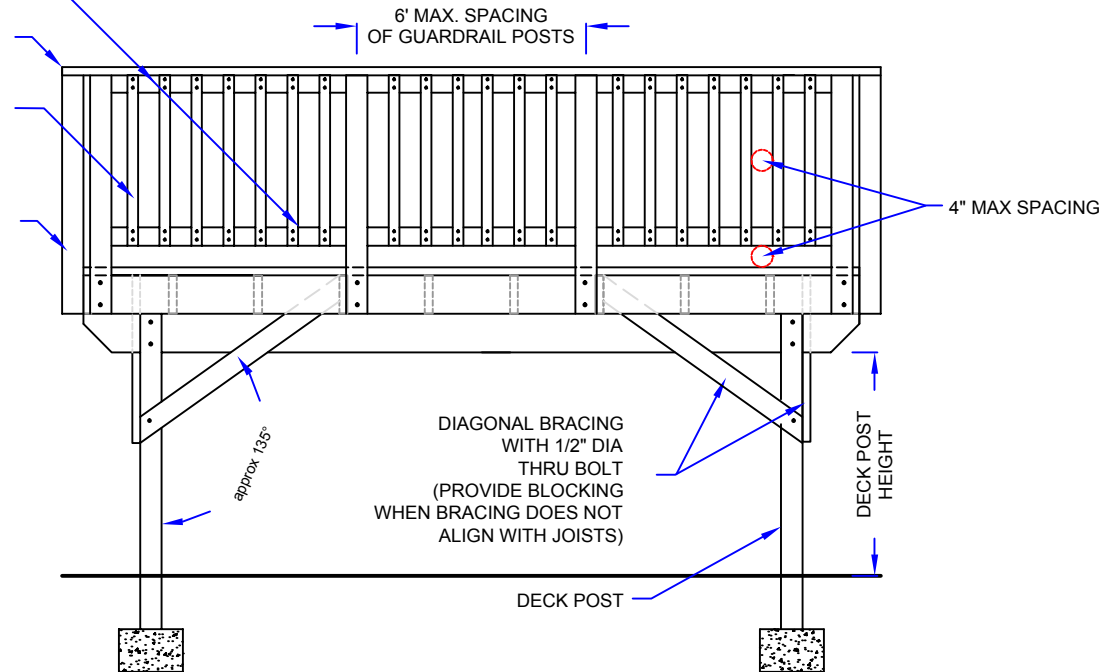
## GUARDRAIL SYSTEM

2x4 RAILS (TOP AND BOTTOM)  
NAILED TO GUARD POSTS

5/4 BOARD OR 2x6  
GUARDRAIL CAP

2x2 PICKETTS CONNECTED  
TO RAILS WITH (2) 8d RING  
SHANK NAILS OR (1) HDG  
WOOD SCREW

4x4 GUARDRAIL POSTS  
(NOT PERMITTED TO BE  
NOTCHED) ATTACHED TO  
RIM BOARD OR DECK JOIST  
AS SHOWN ON SHEET D3



## WOOD DECK POST SIZE

DECK POSTS MAY BE EITHER WOOD OR MASONRY.

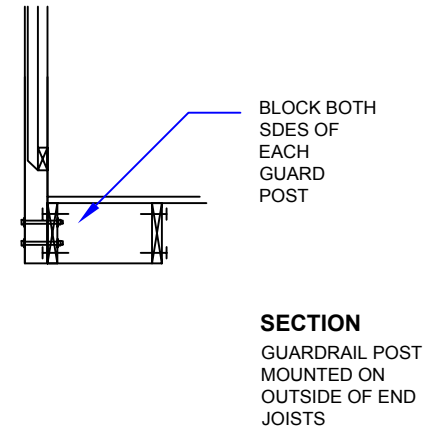
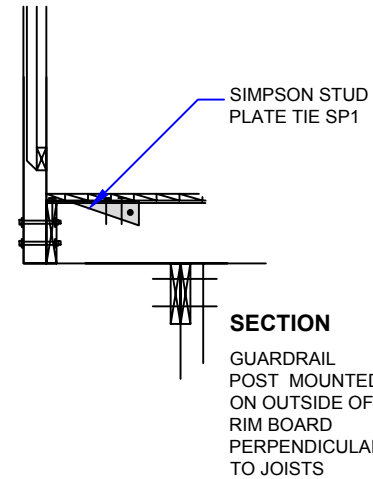
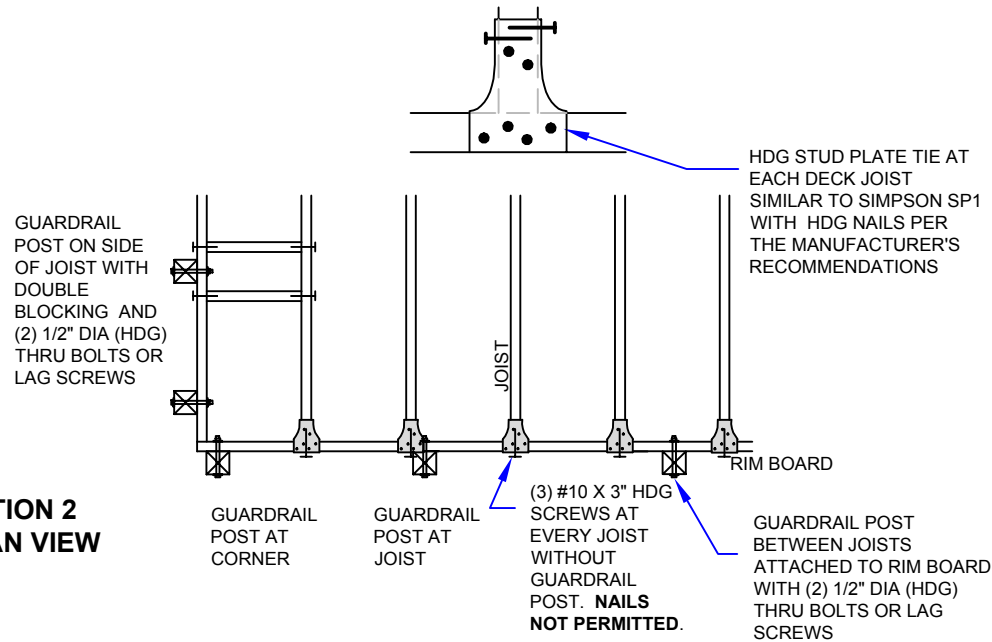
WOOD DECK POSTS SHALL BE PRESERVATIVE TREATED  
AND CONSTRUCTED WITH HOT DIPPED GALVANIZED  
FASTENERS, NAILS, BRACKETS, ETC.

WOOD DECK POSTS SUPPORTING THE DECK GIRDER  
BEAM SHOULD REST ON TOP OF THE CONCRETE  
FOOTING - NOT BE EMBEDDED IN THE CONCRETE. IT IS  
NOT REQUIRED THAT THE WOOD DECK POSTS BE  
PHYSICALLY SECURED TO THE CONCRETE FOOTING,  
ALTHOUGH SEVERAL TYPES OF CONNECTORS ARE  
AVAILABLE IF DESIRED.

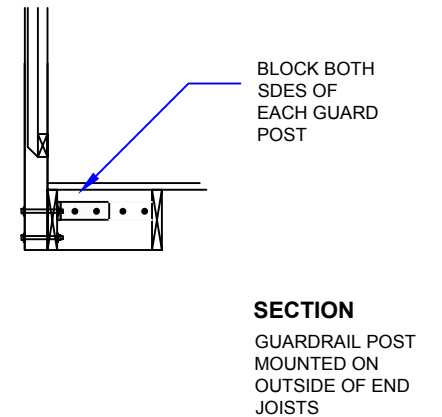
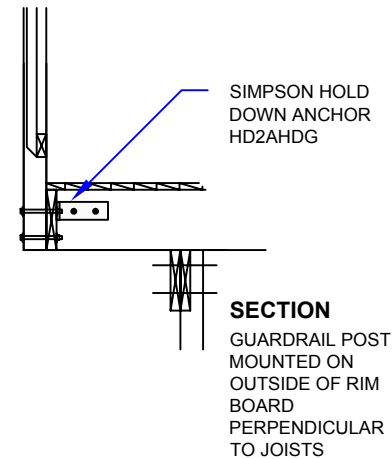
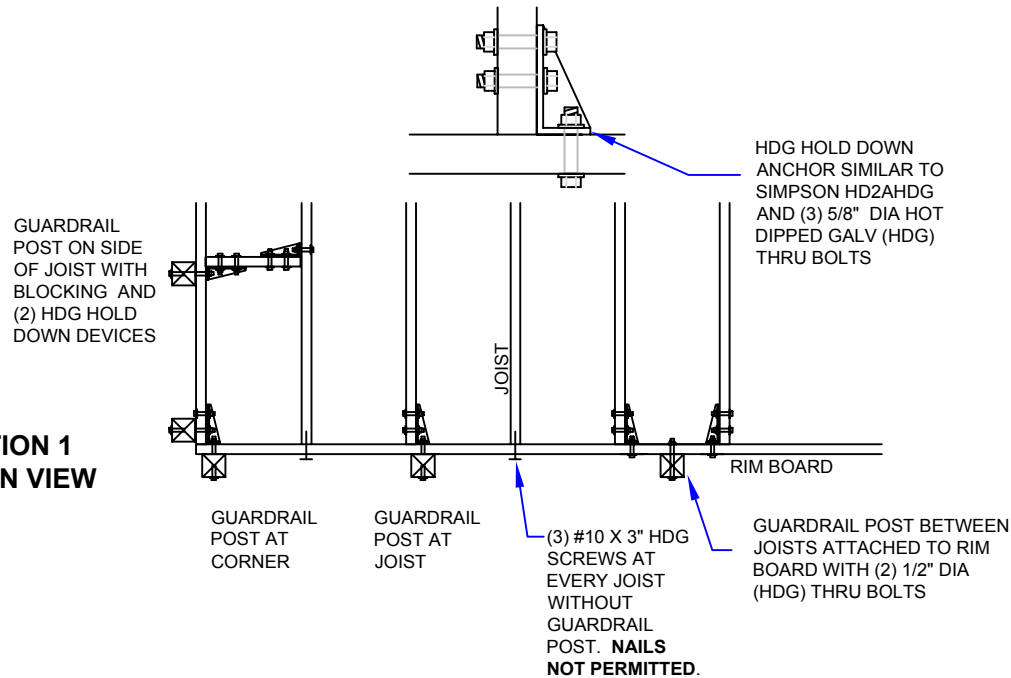
DECK POSTS THAT ARE OVER 8' IN HEIGHT SHOULD BE  
CROSS BRACED IN BOTH DIRECTIONS.

DECK POST HEIGHT LIMITATION	
DECK POST SIZE	MAXIMUM HEIGHT
4X4	8'-0"
4X6	10'-0"
6X6	14'-0"

## OPTION 2 PLAN VIEW

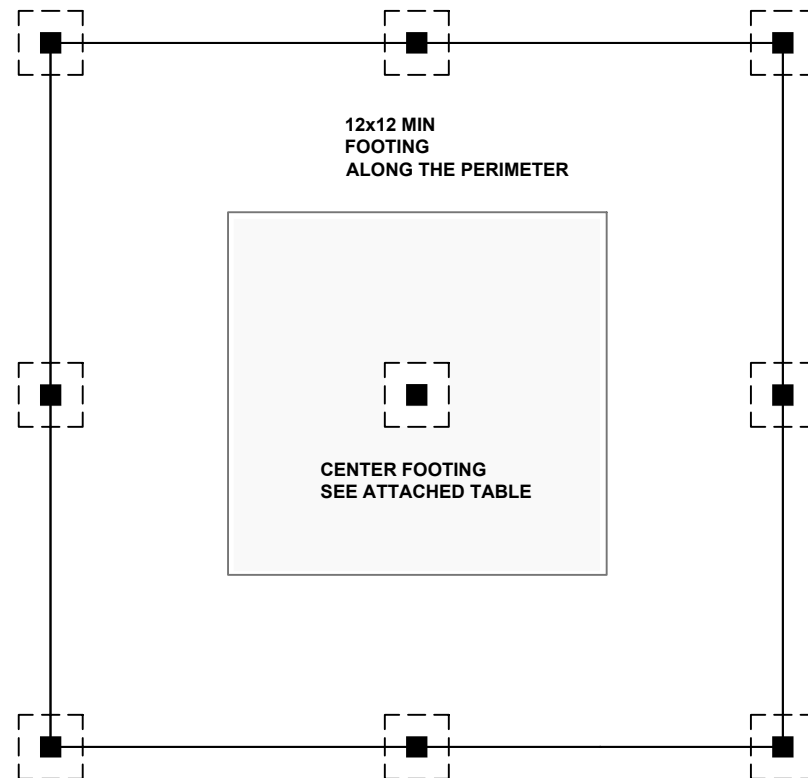
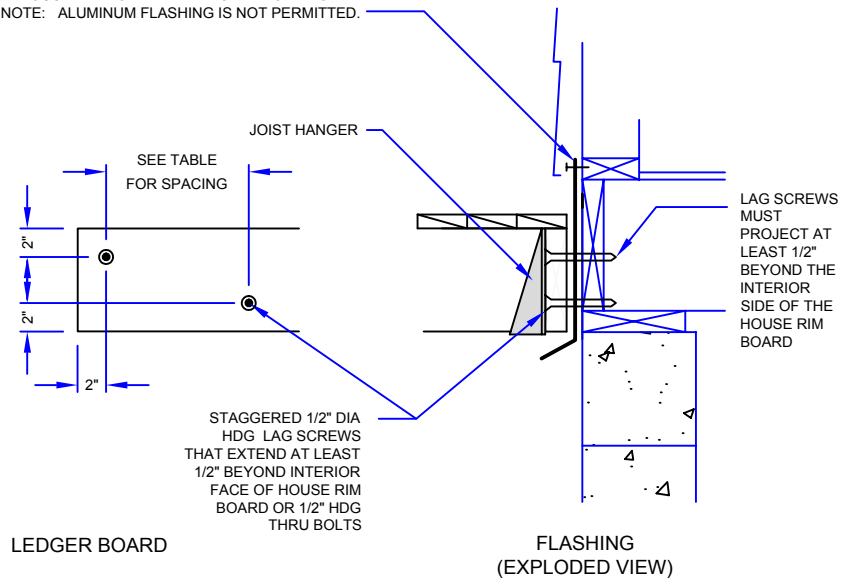


## OPTION 1 PLAN VIEW

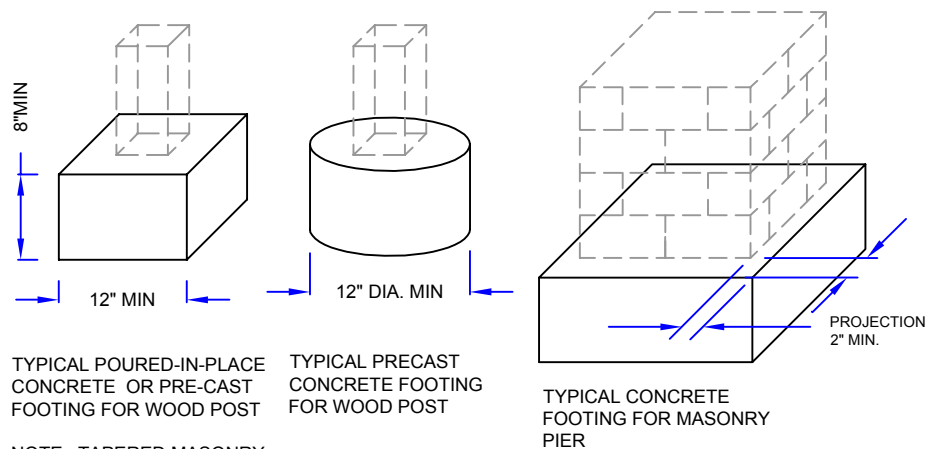


# GUARD POST TO RIM BOARD ATTACHMENT

(1) PIECE OF 19 GA. MIN. FLASHING BETWEEN HOUSE RIM BOARD AND DECK LEDGER BOARD  
NOTE: ALUMINUM FLASHING IS NOT PERMITTED.



## FOOTING OPTIONS



NOTE: TAPERED MASONRY BLOCKS ARE NOT ALLOWED

## FOOTING LAYOUT

CENTER FOOTING SIZE			
JOIST SPAN	GIRDER SPAN	SQUARE FOOTING	ROUND FOOTING
8 FT	8 FT	12" x 12"	12" DIA.
	10 FT	12" x 12"	14" DIA.
	12 FT	13" x 13"	15" DIA.
10 FT	8 FT	12" x 12"	14" DIA.
	10 FT	13" x 13"	15" DIA.
	12 FT	15" x 15"	17" DIA.
12 FT	8 FT	13" x 13"	15" DIA.
	10 FT	15" x 15"	17" DIA.
	12 FT	16" x 16"	18" DIA.
14 FT	8 FT	14" x 14"	16" DIA.
	10 FT	16" x 16"	18" DIA.
	12 FT	17" x 17"	20" DIA.
16 FT	8 FT	15" x 15"	17" DIA.
	10 FT	17" x 17"	19" DIA.
	12 FT	19" x 19"	21" DIA.

# DETAILS

## STAIR REQUIREMENTS

(MOST OF THESE REQUIREMENT ARE ALSO APPLICABLE FOR RAMPS:

### RISERS:

1. THE MAXIMUM RISER HEIGHT IS 8-1/4". THE MAXIMUM VARIATION BETWEEN THE TALLEST AND SHORTEST RISER IS 3/8".
2. OPEN RISERS ARE ALLOWED AS LONG AS THE OPENINGS DO NOT EXCEED 4"

### TREADS

1. THE MINIMUM TREAD WIDTH IS 9". THE MAXIMUM VARIATION IN TREAD WIDTHS BETWEEN THE WIDEST AND NARROWEST IS 3/8".
2. THE TREAD NOSING SHALL PROJECT AT LEAST 3/4" AND NOT MORE THAN 1-1/4" BEYOND ANY SOLID RISER.

### STRINGERS

1. ALL STRINGERS SHALL BE A MINIMUM OF 2x12 P.T. MATERIAL.
2. IF THE STRINGER IS FABRICATED BY CUTTING NOTCHES FOR THE RISERS AND TREADS, THREE STRINGERS SHALL BE PROVIDED. NOTE: DO NOT OVER CUT NOTCHES.  
IF THE STRINGER IS FABRICATED FROM UNCUT 2x12, TWO STRINGERS ARE REQUIRED.
3. STRINGERS SHALL NOT SPAN MORE THAN THE THE DIMENSIONS SHOWN, OTHERWISE, AN INTERMEDIATE POST IS REQUIRED. THE POST SHALL BE SUPPORTED ON A CONCRETE FOOTING AT LEAST 12" DEEP. THE STRINGER SHALL BE ATTACHED TO THE POST WITH (2) 1/2" DIA HDG THRU BOLTS.

### GUARDRAILS FOR STAIRS

1. A GUARDRAIL IS AN ASSEMBLY COMPRISED OF THE FOLLOWING COMPONENTS:
  - A GUARDRAIL CAP, TYPICALLY A 2X6 OR 5/4 BOARD LAID FLAT
  - TOP AND BOTTOM RAILS TO WHICH THE PICKETTS ARE ATTACHED,
  - (GUARD) POSTS
  - AND THE PICKETTS
2. GUARDRAILS ARE REQUIRED WHERE THE DISTANCE FROM THE WALKING SURFACE TO GRADE IS MORE THAN 30".
3. THE TOP OF THE GUARDRAIL CAP MUST BE BETWEEN 34" AND 38" WHERE MEASURED FROM THE NOSING OF THE TREAD.
4. THE BOTTOM RAIL MUST BE LOCATED SO THAT A 6" SPHERE CANNOT PASS BETWEEN THE TRIANGLE FORMED BY THE RISER, TREAD AND BOTTOM RAIL.
5. THE GUARDS SHALL BE ABLE TO WITHSTAND A LOADING OF 200# IN ANY DIRECTION.

### HANDRAILS (NOT TO BE CONFUSED WITH GUARDRAILS)

1. A HANDRAIL (TYPE 1 OR TYPE 2 PROFILE) IS REQUIRED ON AT LEAST ONE SIDE OF THE STAIR WHEN THERE ARE MORE THAN THREE RISERS.
2. THE HANDRAIL SHOULD BE MOUNTED BETWEEN 34 AND 38" ABOVE THE NOSING OF THE TREAD.
3. HANDRAILS HAVE TO "RETURN" TO THE POST OR WALL.

### FOOTINGS

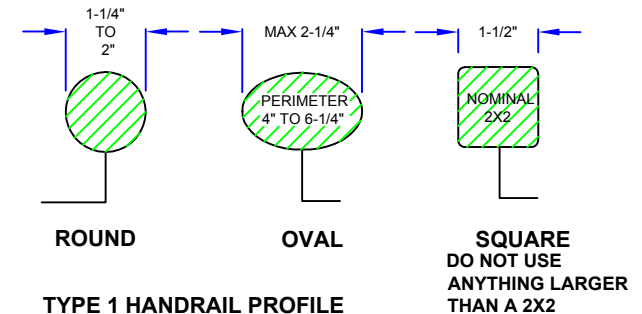
1. THE POST AT THE BOTTOM OF THE STRINGER MUST BE SET ON A CONCRETE FOOTING AT LEAST 12" IN DEPTH.

### CONNECTIONS

1. THE BOTTOM OF P.T. STRINGERS SHALL BE ATTACHED TO EACH P.T. POST WITH (2) 1/2" DIA. HDG THRU BOLTS.
2. THE TOP OF P.T. STRINGERS SHALL BE ATTACHED WITH HDG MECHANICAL FASTENERS AND HDG THRU BOLTS TO EITHER:
  - A P.T. POST EMBEDDED IN THE GROUND ON A FOOTING (PREFERRED),
  - A SAW CUT POST,
  - A RIM BOARD,
  - OR DECK JOIST.

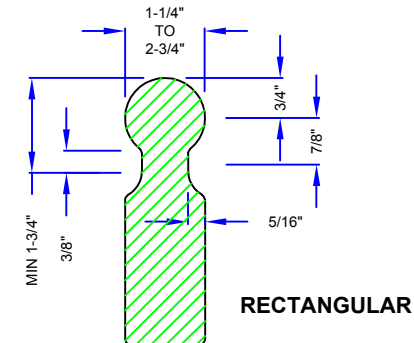
### LANDINGS

1. WHEN A STAIRWAY EXCEEDS A VERTICAL HEIGHT OF 12', AN INTERMEDIATE LANDING SHALL BE PROVIDED.
2. LANDINGS SHALL BE AS WIDE AS THE STAIR WIDTH (TYPICALLY 36").



TYPE 1 HANDRAIL PROFILE

HANDRAILS WITH A CIRCULAR CROSS-SECTION SHALL HAVE AN OUTSIDE DIAMETER OF AT LEAST 1-1/4" AND NOT GREATER THAN 2". IF THE HANDRAIL IS NOT CIRCULAR, IT SHALL HAVE A PERIMETER OF AT LEAST 4" AND NOT GREATER THAN 6-1/4" WITH A MAXIMUM CROSS SECTION OF 2-1/4"



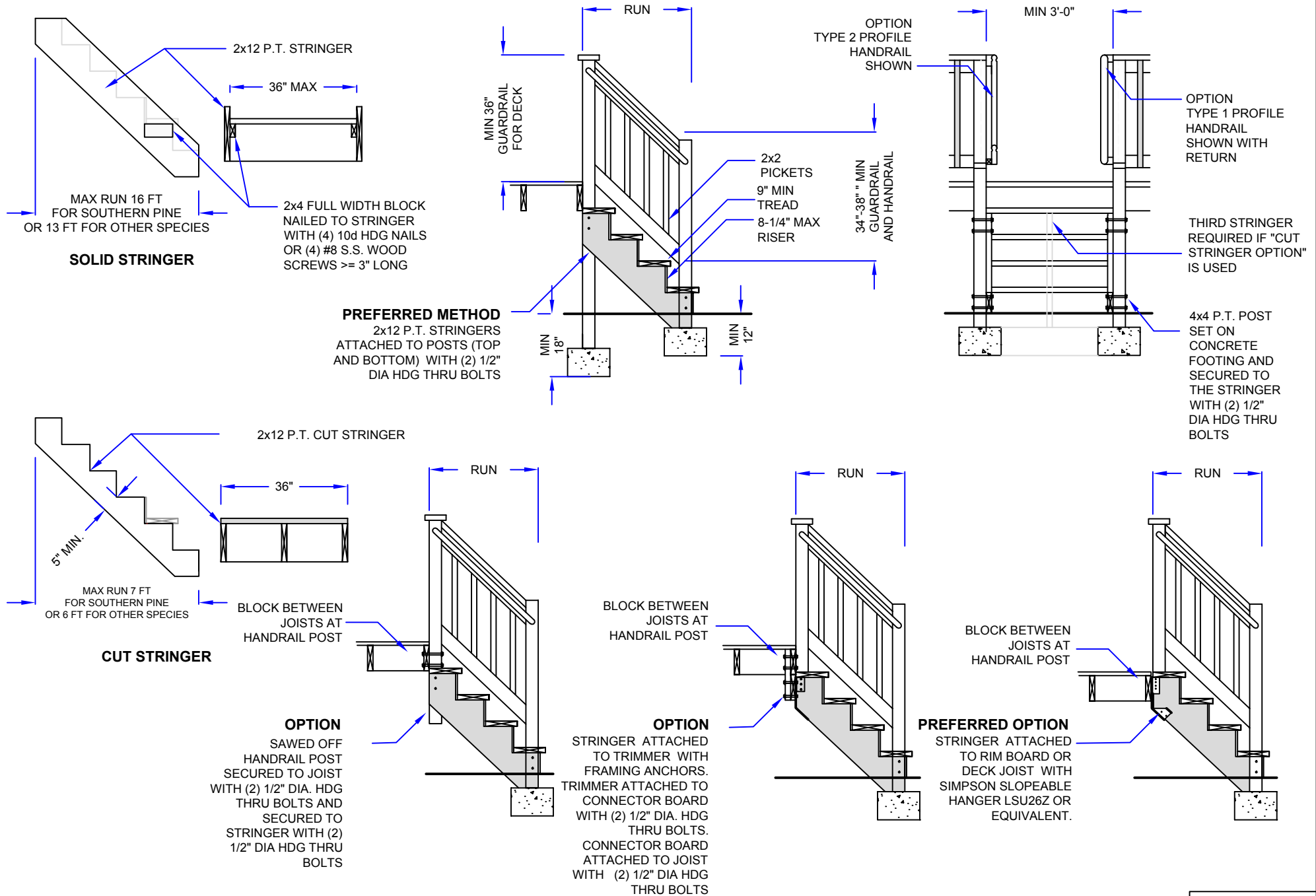
RECTANGULAR

TYPE 2 HANDRAIL PROFILE

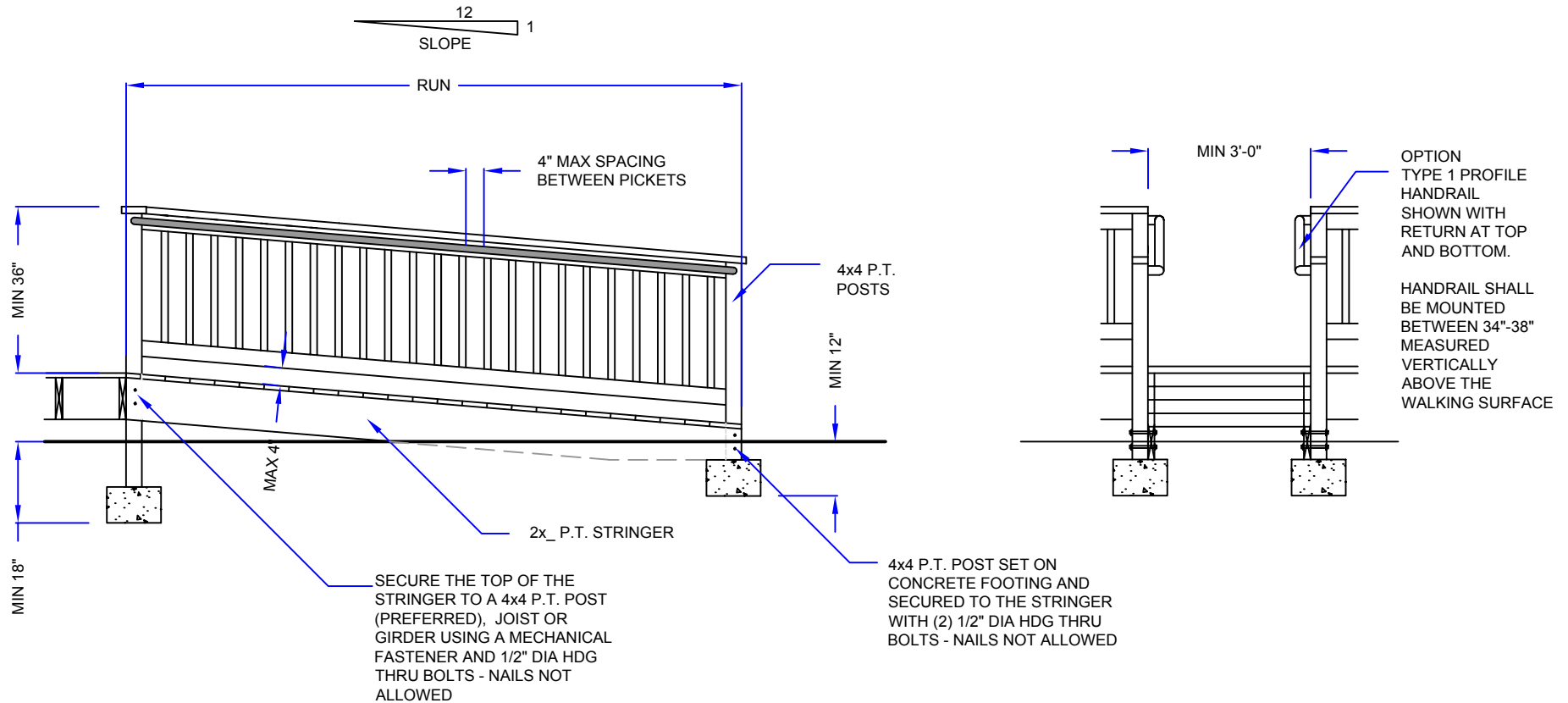
HANDRAILS WITH A PERIMETER GREATER THAN 6-1/4" SHALL PROVIDE A GRASPABLE FINGER RECESS ON BOTH SIDES OF THE PROFILE. THE FINGER RECESS SHALL:

1. BEGIN WITHIN A DISTANCE OF 3/4" MEASURED VERTICALLY FROM THE TALLEST PORTION OF THE PROFILE AND
2. ACHIEVE A DEPTH OF AT LEAST 5/16" WITHIN 7/8" BELOW THE WIDEST PORTION OF THE PROFILE. THE REQUIRED DEPTH SHALL CONTINUE FOR AT LEAST 3/8" TO A LEVEL THAT IS NOT LESS THAN 1-3/4" BLEOW THE TALLEST PROTION OF THE PROFILE. THE MINIMUM WITDTH OF THE HANDRAIL ABOVE THE RECESS SHALL BE 1-1/4" TO A MAXIMUM OF 2-3/4" EDGES SHALL HAVE A MINIMUM RADIUS OF .01"

# STAIR DETAILS



# STAIR DETAILS



STRINGER DESIGN		
RUN LENGTH	MATERIAL	NUMBER OF SUPPORTS
0 FT - 12 FT	(2) 2x8	SUPPORT TOP AND BOTTOM
12 FT - 16 FT	(2) 2x10	SUPPORT TOP AND BOTTOM
16 FT - 19 FT	(2) 2x12	SUPPORT TOP AND BOTTOM
OVER 19 FT	na	ADD INTERMEDIATE POST TO REDUCE RUN LENGTH

#### RAMP NOTES:

1. RAMPS MAY BE STRAIGHT RUNS OR "L" OR "U" SHAPED.
2. RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1:12 (THAT MEANS FOR EVERY INCH IN HEIGHT THE RAMP HAS TO CLIMB, IT SHALL BE ONE FOOT LONG). WHERE IT IS TECHNICALLY INFEASIBLE BECAUSE OF SITE CONSTRAINTS THE MAXIMUM SLOPE MAY BE 1:8
3. IF RAMP EXCEEDS 30 FEET LONG, A MINIMUM 3' LONG INTERMEDIATE FLAT LANDING IS REQD.
4. HANDRAILS ARE REQUIRED ON AT LEAST ONE SIDE OF RAMP, AND MAY BE ATTACHED TO THE HOUSE. REFER TO STAIRWAY SHEET FOR HANDRAIL DETAILS.
5. GUARDRAILS ARE REQUIRED WHERE THE HEIGHT OF THE RAMP ABOVE GRADE EXCEEDS 30"

## RAMP DETAILS